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Ectopotremia: A new genus of prepodesmine millipeds from Mali (Polydesmida: Chelodesmidae)

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ABSTRACT

The new generic and specific names *Ectopotremia pierrardi* are proposed and defined for a prepodesmine collected in southwestern Mali. Generic-level characters include the anterior position of ozopores on segments 5, 7, and 9, the presence of acute ventrodistal spines on the femora, and large subglobose tubercles on the sterna. The telopodite of the male gonopod is singular in having a membranous false articulation at about its midlength.

Of the nearly 100 species of prepodesmine millipeds so far described, the great majority occur in the Guinean-Congolese tropical rain forest. That members of this subfamily are capable of life in drier biotopes, however, is established by the discovery of two species of the new genus *Corystauchenus* (Hoffman, 1994) in the Sahel of northern Nigeria and the following description of another new genus and species endemic to the savannah region of southwestern Mali.

The specimens upon which the following account is based were found among material sent to me for identification by my colleague Didier VandenSpiegel (Musée Royal de l'Afrique Centrale), to whom I am obligated for this and other favors.

Family Chelodesmidae Cook

Subfamily Prepodesminae Cook

Prepodesmidae Cook, 1896: 416. – Chamberlin, 1952: 327.

Prepodesminae: Hoffman 1980: 155.

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Cordyloporinae Brolemann 1916: 562. – Attems, 1938: 370.

Cordyloporidae Demange & Mauriès, 1975: 135.

Although substantial progress has been made in the internal classification of Neotropical chelodesmids (e.g., the definition of 19 tribal taxa), there has been no corresponding improvement in our knowledge of the presumably confamilial African components, only three tribes of uncertain affinities having been recognized. Chamberlin (1952) and Demange & Mauriès (1975) distinguished two subfamilies, but on the basis of different criteria and therefore disparate in terms of their content. A revision of these millipeds was commenced by me in 1960, but has scarcely advanced beyond the data-collection stage. Any attempt to address the questions of relationships and phylogeny within the group can therefore only be speculative, the polarity of most characters being largely undetermined.

However, it may be observed that in a general sense the appearance of "derived" traits is most evident in the West African fauna so far as known. Noteworthy in this context are the granulotuberculate integument of xyodesmids, the aberrant location of their ozopores, and extreme modification of epiproct shape (among many other peculiarities). Additional singularity is added by the median dorsal carina on the collum and hypertrophied subcoxal processes in *Corystauchenus* (Nigeria), the large paramedian horns of the collum in *Thanatomimus* (Nigeria), and the several autapomorphic expressions noted in the diagnosis of *Ectopotremia* (Mali), all of them unique within the subfamily. Within this relatively circumscribed area occurs almost as much external diversity as in the vastly larger Neotropical fauna. There can be little doubt that even the known genera must be accommodated in a number of distinct tribes, and it is obvious that only a fraction of the Afrotropical prepodesmines have been discovered and their diversity documented.

Ectopotremia, new genus

NAME: A neologism composed of the Greek elements *ektopos* (out of place) and *treme* (hole, pore), referring to the anterior displacement of the ozopore on segments 5, 7 and 9. By its occurrence in the semiarid Sahel region the type species is also "out of place" for a prepodesmine.

TYPE SPECIES: *E. pierrardi*, new species.

DIAGNOSIS: Ozopores on segments 5 and 7 located in the anterior half of the paranotal lateral edge; prefemora of legs with ventroapical spine; podosterna with a transverse row of rounded tubercles between legs of the posterior pair. Gonopod telopodite with a membranous "articulation" at about its midlength, between the true acropodite and an adventitious process from the prefemoral region.

REMARKS: In context of the known West African prepodesmine fauna, *Ectopotremia* seems to find closest similarity in gonopod structure with species of the genus *Afolabina*, in which however the general structure is simpler and the telopodite lacks the derived condition of a false articulation. Since it is almost certain that additional subsahelian taxa, relevant to the relationships of these two genera, will be discovered, any further speculation at this point would be premature.

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Ectopotremia pierrardi, new species
Figures 1-10

NAME: For Gaston Pierrard, avid collector and author of numerous works on African Diplopoda.

MATERIAL: Male holotype, two male and two female topoparatypes (MRAC 20.448), from M'pessoba [12°40' N, 5°43' W], ca 95 km SE of Ségou, *Sikasso State*, **Mali**; G. Pierrard leg., 10 July 1970.

DIAGNOSIS: With the characters of the genus, and of the male genitalia as figured (Figs. 9-11).

HOLOTYPE: Adult male, fragmented but length ca 30 mm, body nearly parallel-sided over much of length, width of collum (ends deflected) 3.7 mm, segment 2, 4.8 mm, segment 8, 5.3 mm, segment 12, 5.3 mm, segment 16, 4.5 mm. W/L ratio ca 18%.

Color faded in preservative, but appearing to have been light brown dorsally, with head, mandibles, anterior margin of collum, entire dorsal surface of paranota, and median metatergal spot yellowish; basal antennomeres and podomeres yellow or testaceous, distal articles darker.

Head without modifications, finely pubescent, interantennal space (0.8 mm) slightly greater than length of basal antennomere. Labrogenal offset prominently defined. Antennae long (5.5 mm), extending back to 5th paranota, articles 2-6 about equal in length and similar in appearance.

Anterior segments (Fig. 1) relatively broad *vis-à-vis* their paranotal length, median length of metazona on segments 2-3 less than half paranotal length; paranota of 2nd smallest, those of segment 5 abruptly larger than the preceding. Paranota of segments 2-9 transverse, thereafter increasingly inclined posteriad and with posterior corners more acutely projected. Metaterga finely and evenly granular, a prominent transverse sulcus from segment 5 onwards. Ozopores on segments 5, 7 and 9 located in anterior half of paranotal edge (Fig. 2, 3), thereafter shifting more posteriad, placed in slightly differentiated oval peritreme on anterior segments, in elongated slightly enlarged marginal rim more posteriorly. Paranota of terminal segments and epiproct as in Fig. 5. Stricture clearly defined around body but without sharp edges.

Sterna slightly elevated, without subcoxal spines but with a transverse row of 4-6 rounded tubercles between legs of the last pair (Fig. 7). Legs not notably elongated, podomeres as shown in Fig. 6, prefemora with prominent ventrodistal spine; surface invested with short declivous pale setae, most numerous on tibiae and tarsi. Tarsal claws long and acute. Sides of metazona granular, without posterior row of spines, but a low boss just above anterior coxal condyle. Stigmata elongate pyriform, anterior much larger than posterior, not notably elevated.

Anterior sterna and legs without modifications, prefemora without distal spines. Gonopod aperture transversely oval, extending into about half prozonal length, lateral ends elevated, caudal edge with low rim.

Gonopods relatively large, extending forward over sternum of 6th segment. Gonocoxae attached loosely to a rectangular sclerotized median sternal remnant (Fig. 8, S), without trace of dorsal apophysis, the usual field of paracannular setae present and a field of

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dispersed setae on the dorsal and lateral sides. Telopodite set on coxa at a right angle, the median axis nearly straight, a lateral ramus (prefemoral process?) partly set off from prefemoral by a membranous cingulum (arrow, Figs. 9 and 10). Prostatic groove visible in mesal aspect for most of its length, running out on a short acicular solenomere, remainder of acropodite broadened, somewhat sigmoidally bent, detailed form represented in Figs. 8-10.

References

Attems, C. 1938. Myriapoda 3, Polydesmoidea 2. Fam. Leptodesmidae, Platyrhachidae, Oxydesmidae, Gomphodesmidae. Das Tierreich, 69: 1-487.

Brolemann, H. W. 1916. Essai sur classification des polydesmiens. Ann. Soc. Ent. France 84: 523-608.

Chamberlin, R. V. 1952. An arrangement of the Prepodesmidae, a family of African millipeds. Journ. Washington Acad. Sci., 42: 327-333.

Cook, O. F. 1896. A new diplopod fauna in Liberia. Amer. Natur., 30: 413-420.

Demange, J.-M. & J.-P. Mauriès. 1975. Myriapodes-Diplopodes des Montes Nimba et Tonkou (Côte d'Ivoire, Guinée), récoltés par M. Lamotte et ses collaborateurs de 1942 à 1960. Ann. Mus. Roy. Afr. centr., sci. zool., 212: 1-192.

Hoffman, R. L. 1980. Classification of the Diplopoda. Muséum d'Histoire naturelle, Genève. Pp. 1-237.

Hoffman, R. L. 1994. An interesting disjunct new genus of prepodesmine millipeds from Nigeria (Polydesmida: Chelodesmidae). Myriapodologica, 3: 37-42.

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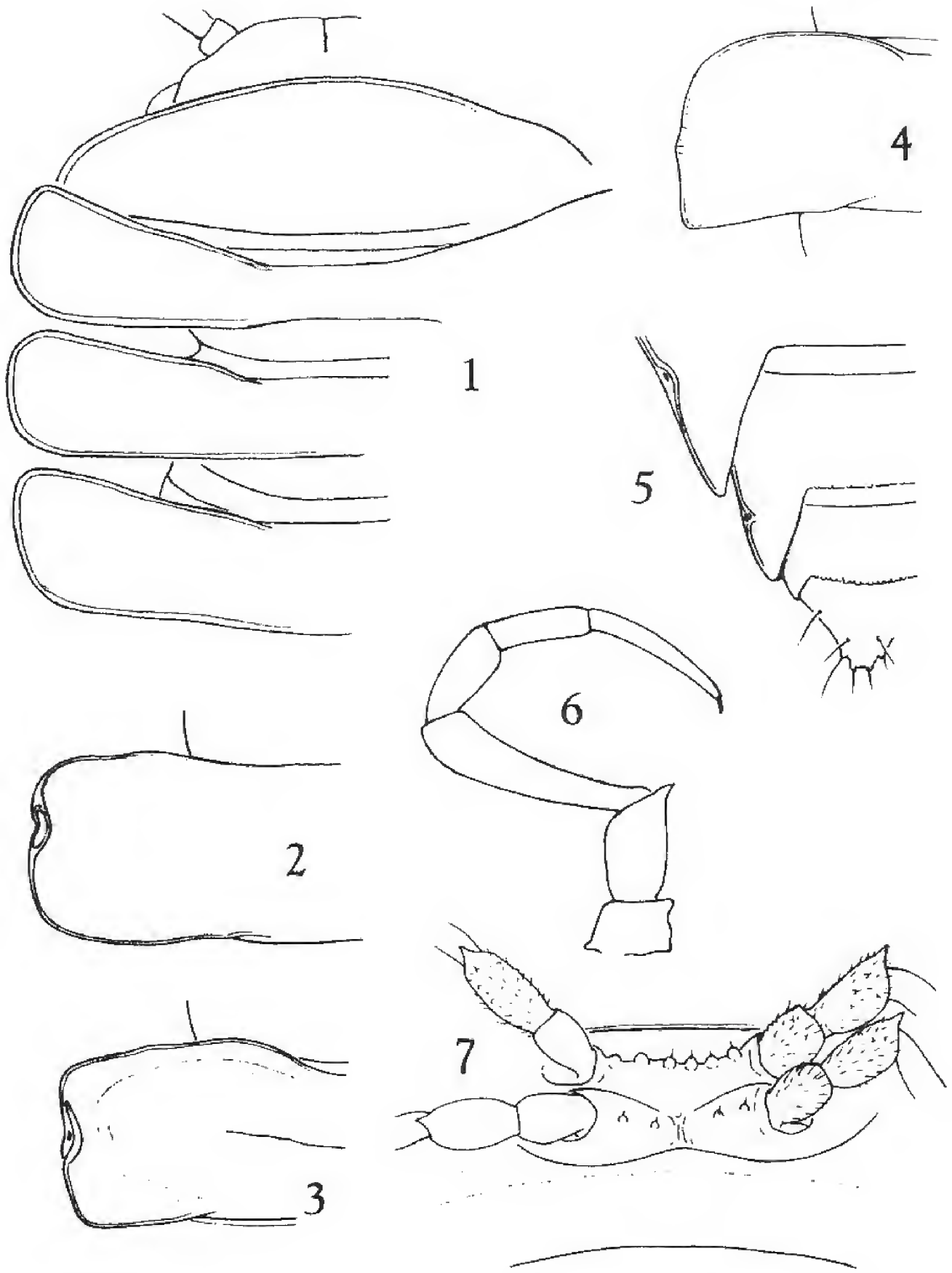

Figure 1. Head and first four segments, left side, dorsal aspect. Figure 2. Left paranotum of segment 5, dorsal. Figure 3. Left paranotum of segment 9, dorsal. Figure 4. Left paranotum of segment 14, dorsal. Figure 5. Posterior end of body, segments 18-20, left side, dorsal. Figure 6. Leg from midbody segment showing prefemoral spine. Figure 7. Sternum of midbody segment, showing transverse row of tubercles.

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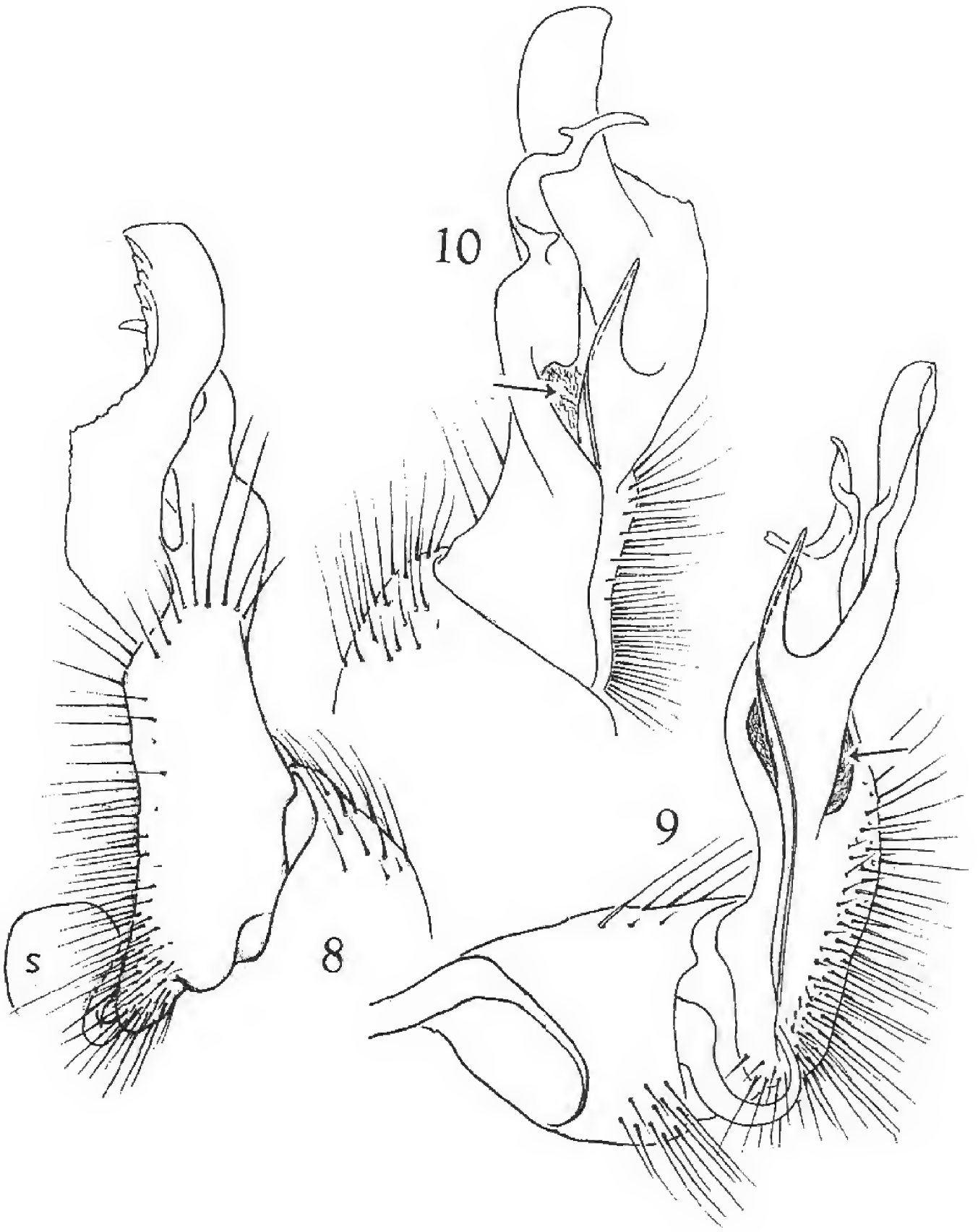

Figure 8. Left gonopod, ventral aspect, *in situ*. Figure 9. Left gonopod, mesal aspect. Figure 10. telopodite of left gonopod, dorsal (coxal) aspect. Membranous false articulation shown by →, median gonosternal remnant by S.

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